

CONTROL WEEDS UNDER BENCHES

Arthur Bing

Department of Floriculture Cornell University

Weeds under the benches are a nuisance. They can provide protection for such pests as whitefly, red spider, and slugs. They may be the source of virus diseases that insects can spread. Oxalis, a common greenhouse weed, can shoot seeds on to previously sterilized bench soil or potting media. Weeds under benches do not give the impression of a neat efficient greenhouse operation.

Weeds can be controlled safely and economically in areas that will not have direct contact with roots of crop plants or soil that will be used to grow crops. The herbicides monuron (Telvar), diuron (Karmex DW) and simazine will give good long lasting control of most greenhouse weeds. Their action is on the roots of weeds and when used at high enough rates to control weeds will persist in the soil for a year or more. So do not put pot plants on the ground or temporarily store bench soil on treated soil and then put it in the benches.

These herbicides are rather insoluble and leach slowly but can be moved with surface soil under erosion conditions. Because of their relatively insoluble nature, the wettable powders must be agitated in the sprayer to give even coverage. These materials are not growth regulators like 2,4-D and can be safely used in the regularly used sprayers if washed out with detergent and rinsed after use. The diuron is similar to but less soluble than monuron.

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Usually it is only necessary to spray the dirt walk or under the bench for a distance of 2 feet from a concrete walk as this is the area in which most weeds grow. Use a spray nozzle that gives a fan shaped spray such as a T-Jet nozzle. Ordinarily it takes about 1 gallon of water to cover 400 square feet. Find out how much plain water it takes to cover 400 square feet. Then put the amount of chemical for 400 square feet into the predetermined amount of water.

Use monuron and diuron at 5 pounds active ingredient (6 lbs. 80% WP) per acre and simazine at 10 lbs. active ingredient (13 lbs. 80% WP) per acre. Using more gives better, longer lasting control. This is quite different from treating a crop where an overdose can cause injury. Do not figure on using treated soil for crops in the near future. For temporary control of weeds, especially grasses, use paraquat at 1-2 oz. per gallon of water plus 1/3 of B77 spreader. This is a very good treatment for areas to be used for pot plants as there is no harmful residue and this material is very effective against grasses. It does not have the persistence in the soil that is typical of sodium arsenite. Table 1 shows amounts for smaller area.

Table 1. Amounts of Herbicide for Use Under Benches

Herbicide	lbs. aia*	80% WP/A	on 1000 sq. ft.		on 400 sq. ft.	
			wt. in oz.	table- spoon**	wt. in oz.	table- spoon**
Monuron	5	6	2 1/4	9	1	4
Diuron	5	6	2 1/4	9	1	4
Simazine	10	13	4 1/2	24	3	10
Paraquat			1 oz		1/3	

*aia--active ingredient per acre

**approximate in level tablespoons

Your editor

W D Holley

COLORADO FLOWER GROWERS ASSOCIATION, INC.
OFFICE OF EDITOR
W. D. HOLLEY
Colorado State University
Fort Collins, Colorado 80521

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